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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
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HOMAYOUNMEHR, FARID

ART UNIT	PAPER NUMBER
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2439

NOTIFICATION DATE	DELIVERY MODE
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08/24/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATDOCTC@fr.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/675,930	<b>Applicant(s)</b> DIETL, JOSEF	
	<b>Examiner</b> Farid Homayounmehr	<b>Art Unit</b> 2439	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 May 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 3-6, 13-16, 18 and 28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 3-6, 13-16, and 18 28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. This action is responsive to communications: application, filed 9/29/2003; amendment filed 5/28/2009.
2. Claims 3-6, 13-16, and 18-28 are pending in the case. Claims 1, 2, 7-12, 17 have been cancelled by the applicant. Claims 18-28 are new.

### ***Response to Arguments***

3. Applicant's arguments are moot in the view of the new grounds of rejection as follows.

### ***Claim Rejections - 35 USC § 101***

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 23-28 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Said claims are directed to a computer program, or means to perform functions, the means being software only (see applicant's specification at paragraph 36 indicating the invention can be implemented in software). Note that storing the software in a storage system does not make the claims statutory,

Art Unit: 2439

as the claims are directed to the program, not to the storage medium. The storage medium containing the program is not the same a program stored in a storage device.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3-6, 13-16, 18- rejected under 35 U.S.C. 103(a) as being unpatentable over Slater et. al (US Patent Application Publication No. 2002/0069179, filed June 6, 2001), in view of Shioda (US Patent No. 6,634,559, filed March 29, 2001), and further in view of Nor et al (US Application Publication No. 0193543), hereinafter called Nord.

7.1. As per claim 18, Slater is directed to a computer implemented method, comprising: in a workflow system as part of a workflow in the workflow system: generating an electronic document in a workflow system (parag. 31 shows generation of an electronic document, and parag. 33 indicates that the invention can be used in applications such as business licenses, which is an example of a workflow system as identified by applicant's specification), for use with an external entity that does not exchange electronic documents with the workflow system (Slater does not explicitly

Art Unit: 2439

teach, but Shioda teaches a data sheet that can be carried by the user (abstract). The data sheet includes a printout of the encoded entire electronic document on paper (col. 2 lines 22-63). The data sheet, which includes the entire document on a printout (not stored electronically, is distributed to other systems by the user (col. 3 lines 5-35). Note that a decoding unit decodes the encoded entire document to obtain the entire document back. Also note that Slater does teach printing a document for review by a user, as shown in paragraph 64), the electronic document having text content (documents exemplified by Slater include legal documents, which contain text), the electronic document further having a human-readable document appearance, representing the text content (Slater parag 31 shows that the document is readable by both machine and human, therefore it has a content and appearance. Also see Fig. 2B and associated text); attaching one or more approval codes to the electronic document, such that when the document is printed, each approval code generates an approval mark (per Slater parag. 30, the signer of the document examines it (approve) and signs it (approval code), which is verifiable. As mentioned above, Slater teaches printing the document. Also per teachings of Shioda, the entire document is printed on the paper in the encoded form and also the image, therefore the approval codes are also printed); Converting the text content into a canonical form (conversion to canonical forms before creating digital signatures were well known in art. Slater suggests use of XML schema to embed digital signatures (see parag. 84). One of the features of XML is the capability of converting the XML document to its canonical form according to W3C Canonical XML 1.0 recommendation (as a reference see "Canonical XML Version 1.0" and "Core XML

Art Unit: 2439

Standards”, both of which were attached to a previous office action). It would have been obvious to a person skilled in art to convert the document to its canonical form and encrypt the canonical form to generate a digital signature. The motivation to do so is faster and more efficient encryption performed on canonical documents, as described, for example, in section 1.2 of “Canonical XML Version 1.0”. Also conversion as taught by W3C Canonical XML 1.0 is deemed in an unambiguous reading order, as there is no ambiguity introduced in the method described in the cited document), wherein the text content is in an unambiguous reading order (parag. 84 shows that Slater intends to make the documents visually appealing. Also, the documents must be reviewable by the users (see parag. 31 and 64), therefore the text must be in an unambiguous reading order),

generating control codes for the electronic document as part of a workflow in the workflow system (control codes are the signature blocks added to document as described in parag. 29-32, which contain the signatures. Note that the digital signatures are encrypted (see Slater parag. 13, indicating that the digital signature is decrypted), and therefore the encrypted digital signature creates a control code for verification of the digital signature),

the control codes including one or more first control codes that each correspond to a respective approval code (each digital signature is encrypted and saved in the signature block), wherein one or more first control codes authenticate the respective approval code (paragraph 7 shows that a digital signature (control code) is made using the private key of the user. Therefore, the digital signature authenticates the user),

Art Unit: 2439

and one or more second control codes generated from the canonical form of the text content (Slater teaches signing the entire document, For example by a notary or recorder after primary signers sign the document. The signature by notary or recorder applies to the content of the document, which as described above, includes a canonically converted text), wherein the one or more second control codes authenticate the text content (as mentioned above and in paragraph 7, the hash of the document text content is created and encrypted. This ensures that the text associated with the document is the one that is signed and therefore authenticates the text content), and creating a print out of the electronic document, the print out including a full-sized version of the human readable document appearance representing the text content, the respective approval mark corresponding to each approval code, and a barcode representation of the one or more first control codes, and the one or more second control codes (Slater parag. 64 and also 84. Also note that Shioda teaches printing the entire document, and therefore Shioda teaches a full-sized version of the document (see Shioda col. 2 lines 28-63, where it teaches the entire document is printed so the user can view the entire document). Also note that Shioda teaches printing a barcode (see Fig. 1 and associated text, particularly the section starting at col. 6 line 57), where the barcode represents a processing codes. Therefore, it would have been obvious to use the barcode to represent any process or information associated with the document, such as the control codes), the one or more first control codes being usable to authenticate the one or more respective approval marks (Slater parag. 31-34 shows verification of each signature, thereby verification of the signature associated with first

Art Unit: 2439

control codes authenticates the approval marks), and the one or more second control codes being usable to validate the text content of the printout (Slater parag. 31-34 shows verification of each signature, thereby verification of the signature associated with second control codes validates the text, as the signature was associated with the text); sending the printout to the external entity (making a printout of a digital signature and distributing them to external entities (Slater teaches distribution of the electronic document. Slater paragraph 64 teaches an option of printing the electronic document for review by a user. Since Slater teaches printing the electronic document for review by user, it also teaches printing the document for users that do not exchange electronic documents with the system, as the print out is useful for users who do not exchange document electronically. Also, as shown in the following, Nord also teaches printing a document created electronically, and signing and verifying it).

Slater and Shioda are combined to teach the claim limitation as described above, as it would have been obvious to the one skilled in art to combine the inventions. This is because Slater and Shioda are analogous arts as they are directed to management and distribution of electronic documents. Shioda teaches a data sheet, by which an electronic can be carried and distributed by the user. Therefore, the one skilled in art would be motivated by Shioda to carry and distribute Slater's electronic document.

The claim also requires: receiving a modified print out at the workflow system back from the external entity, the modified print out comprising the print out sent to the external entity with a modification; validating the modified print out within the workflow system



Art Unit: 2439

using the one or more control codes; integrating the validated and modified print out into the workflow; and continuing the workflow for the validated print out within the workflow system. This feature is not explicitly taught by the combination of Slater and Shioda. However, Nord teaches simultaneously signing a digital and a printed version of the document. After the paper document is signed, it is scanned and placed in the system (see paragraphs, 5-12, 67-68, or the abstract).

At the time of the invention, it would have been obvious to the one skilled in art to combine the system of Slater in view of Shioda with the system of Nord, and generate a printed copy of the digitally signed document, send it to a user to sign the paper document and store the document back in the system after scanning. Note that Slater teaches inclusion of verification codes on the document and verifying their authenticity. Further note that the paper document, once signed, is in fact modified. For details of verifying a document, see Slater Figures 4-6 and associated text.

7.2. Claim 2 cancelled by the applicant

7.3. As per claim 3, Slater is directed to the method of claim 18, wherein generating the approval mark comprises:

generating a digital signature as the approval code (see response to claim 1); and  
generating a signature image associated with the approval code (when the signature is printed, the image of the signature is produced).

7.4. As per claim 4, Slater is directed to the method of claim 18, wherein generating one or more second control codes comprises: generating a single second control code for all of the text content (per paragraph 32, the recorder signature and notary signature may be omitted. Per parag 44, one or more persons may sign it. Therefore, it is possible only the notary or only the recorder sign the document, therefore creating a single signature (control code) for the entire document, which results in a single signature (control code) is all the text content).

7.5. As per claim 5, Slater is directed to the method of claim 18, wherein the print out has two or more physical pages and generating the one or more second control codes comprises: generating one or more second control codes, each second control code corresponding to the text content on a page of the one or more physical pages (placing each digital signature in a separate page is a design choice that is obvious to a person skilled in art. Also, printing documents amounting to two or more pages was widely practiced and well-known in the art at the time of invention).

7.6. As per claim 6, Slater is directed to the method of claim 18, wherein generating the one or more second control codes comprises: encrypting the canonical form with a private key, the private key having an associated public key certificate for retrieving a public key associated with the private key (conversion to canonical forms before creating digital signatures were well known in art. Slater suggests use of XML schema

Art Unit: 2439

to embed digital signatures. One of the features of XML is the capability of converting the XML document to its canonical form according to W3C Canonical XML 1.0 recommendation (as a reference see “Canonical XML Version 1.0” and “Core XML Standards”, both of which are attached to this office action). It would have been obvious to a person skilled in art to convert the document to its canonical form and encrypt the canonical form to generate a digital signature. The motivation to do so is faster and more efficient encryption performed on canonical documents, as described, for example, in section 1.2 of “Canonical XML Version 1.0”. Use of private and public keys to create and verify digital signatures was well known and widely practiced at the time of invention).

7.7. Claims 7-12 cancelled.

7.8. Limitations of claims 13-17, 19 are substantially the same as limitations of claims 18, 3-6 above.

7.10. As per claim 20, Slater paragraphs 15, 41, 47, 49, 52, 87, and particularly 90-92 are examples showing adding routing information to the document, and routing it accordingly. As also shown above, Slater also teaches verifying the content of the document.

7.11. Limitations of claims 21-28 are substantially the same as claims 3-6, 13-20 above.

***Conclusion***

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Farid Homayounmehr whose telephone number is (571) 272-3739. The examiner can be normally reached on 9 hrs Mon-Fri, off Monday biweekly.

Art Unit: 2439

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached on (571) 272-7874. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

***Farid Homayounmehr***

***8/16/2009***

/Edan Orgad/

Supervisory Patent Examiner, Art Unit 2439

Application/Control Number: 10/675,930  
Art Unit: 2439

Page 13